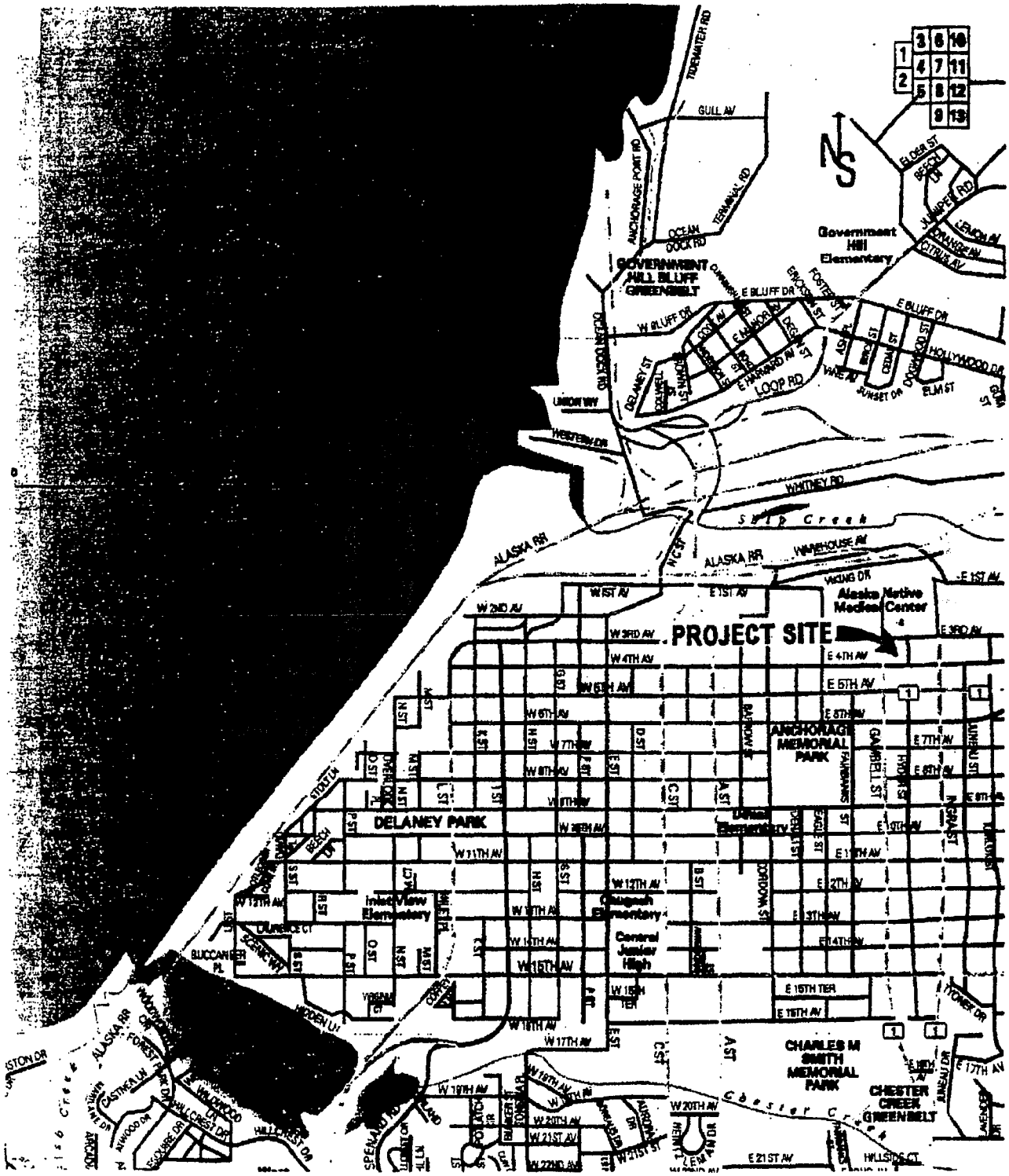
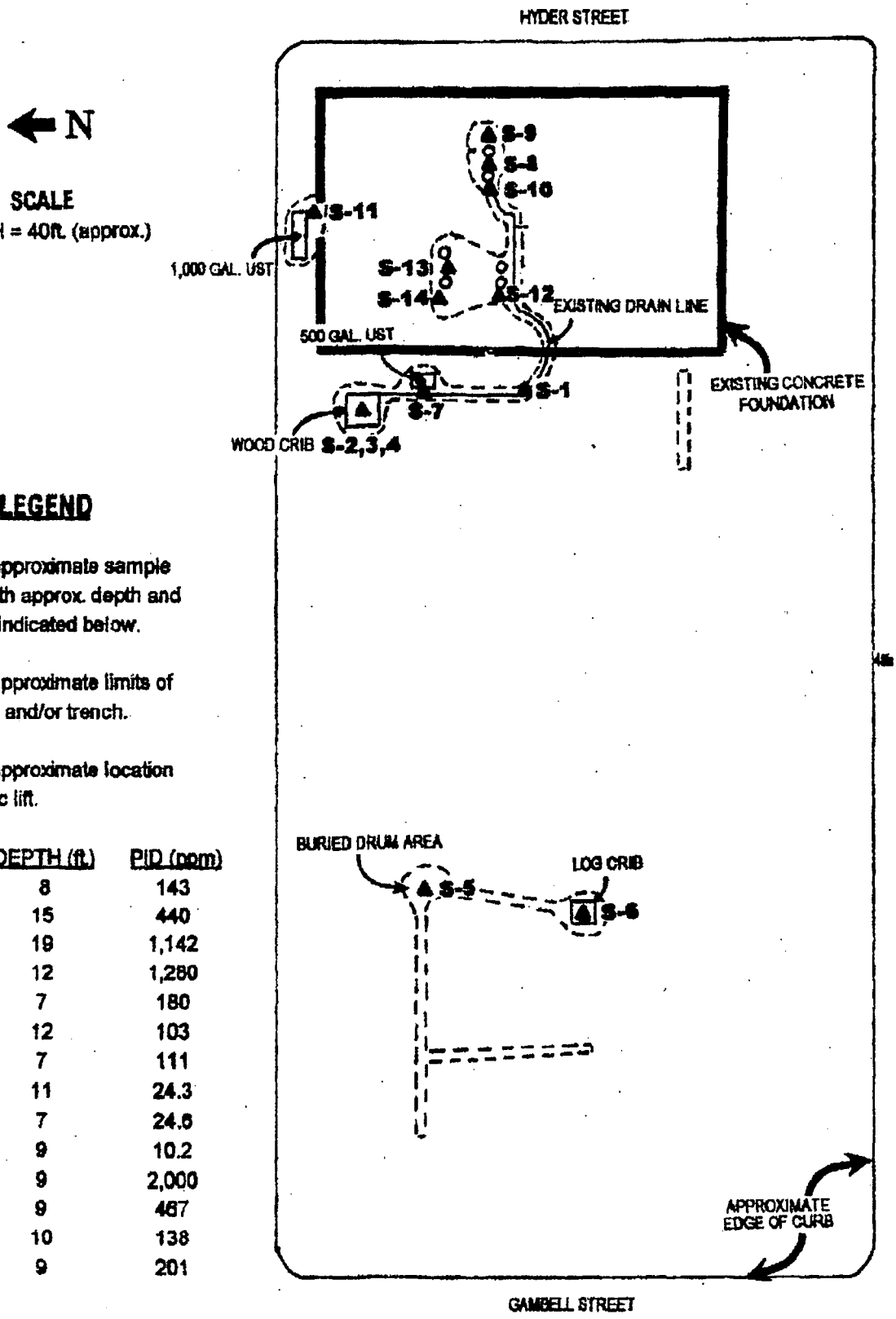


QUALITY ENVIRONMENTAL SAMPLING	**VICINITY MAP**	**EPMI 4th & GAMBELL ANCHORAGE, ALASKA**

FIGURE 1

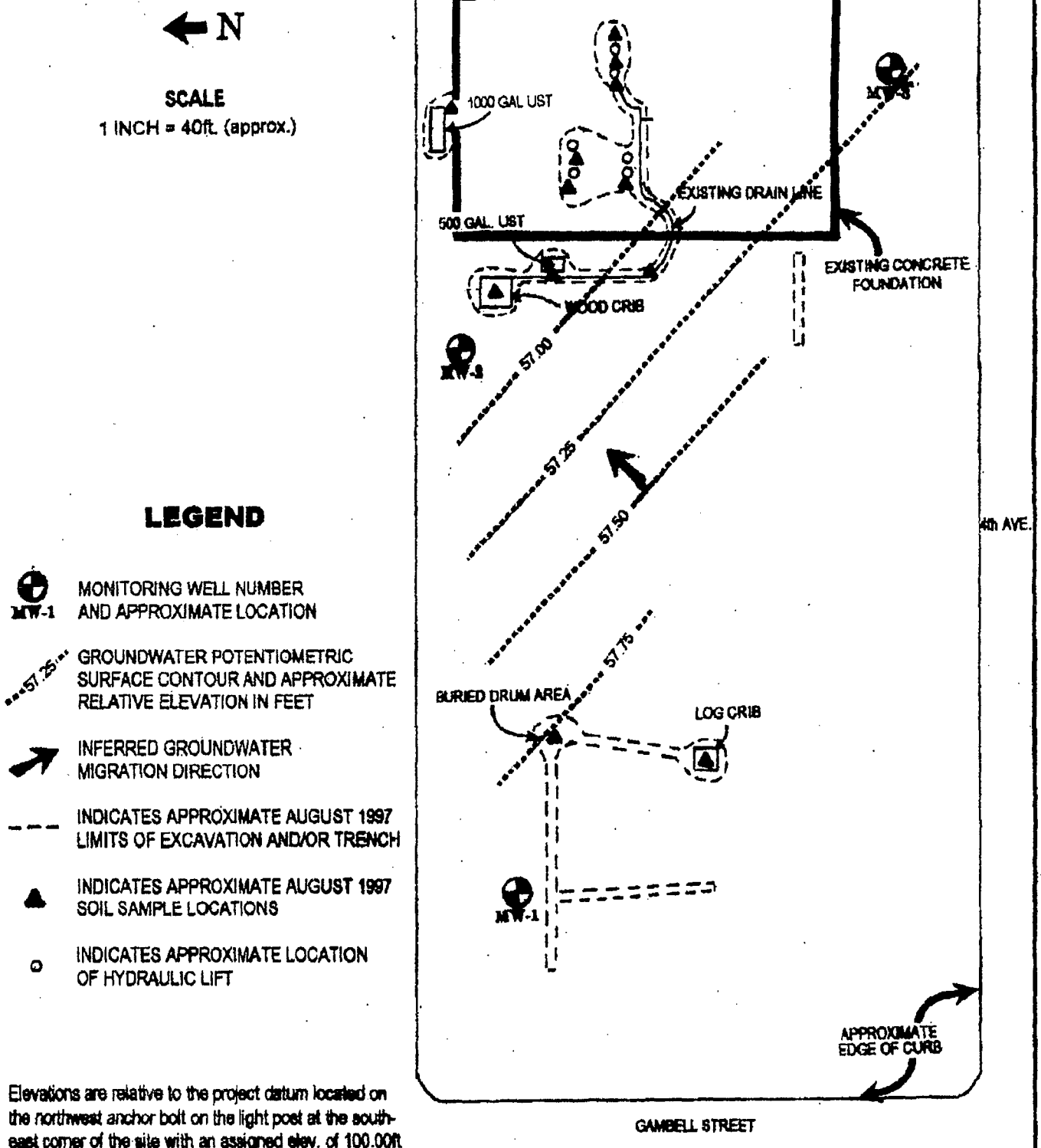


SAMPLE	DEPTH (ft)	PID (ppm)
S-1	8	143
S-2	15	440
S-3	19	1,142
S-4	12	1,280
S-5	7	180
S-6	12	103
S-7	7	111
S-8	11	24.3
S-9	7	24.6
S-10	9	10.2
S-11	9	2,000
S-12	9	467
S-13	10	138
S-14	9	201

SITE PLAN/SAMPLE LOCATIONS

EPMI
4th & GAMBELL
ANCHORAGE, ALASKA

FIGURE 2



QUALITY ENVIRONMENTAL SAMPLING

SITE PLAN/SAMPLE LOCATIONS

EPMI
4th & GAMBELL
ANCHORAGE, ALASKA

FIGURE 3

APPENDIX C

SAMPLE RESULTS TABLES

TABLE 1 - HYDROCARBON CONTENT IN SOIL			
SAMPLE IDENTIFICATION	PID Reading	AK102 ANALYSIS (parts per million)	AK103 ANALYSIS (parts per million)
S1 - Break in Piping 8' bgs	143	----------	253
S8 - Between Hydro Lift 11' bgs	24.3	----------	4,830
S9 - East Side Hydro Lift 7' bgs	24.6	----------	ND
S10 - West Side Hydro Lift 9' bgs	10.2	----------	ND
S12 - Hydro Reservoir 9' bgs	467	----------	ND
S13 - Between Hydro Lift 10' bgs	138	----------	2,660
S14 - Below Hydro Piping 9' bgs	201	----------	ND
S7 - Below 500 gal UST 7' bgs	111	223	----------
S11 - Below 1,000 gal UST 9' bgs	2,000	ND	----------
MW-1 S-2 - Well 1 at 35' bgs	156	----------	16

TABLE 2 - VOLATILE ORGANIC COMPOUNDS IN SOIL				
ANALYTE	S3	S4	S5	S6
n-Butylbenzene	ND	19,800 ppb	ND	ND
sec-Butylbenzene	ND	15,600 ppb	ND	ND
cis-1,2-Dichloroethylene	ND	800 ppb	ND	ND
Ethylbenzene	ND	5,500 ppb	ND	ND
Isopropylbenzene	ND	2,900 ppb	ND	ND
p-Isopropyltoluene	ND	102,000 ppb	ND	ND
Naphthalene	ND	8,000 ppb	ND	ND
Tetrachloroethylene	ND	4,500 ppb	3,200 ppb	1,000 ppb
Toluene	ND	9,000 ppb	ND	ND
1,2,4-Trimethlybenzene	ND	178,000 ppb	ND	ND
1,3,5-Trimethlybenzene	ND	49,500 ppb	ND	ND
Total Xylenes	ND	52,000 ppb	ND	ND

*Reported in Parts Per Billion (ppb)

TABLE 3 - METAL ANALYSIS IN SOIL (ppm)					
ANALYTE	S1	S3	S4	S6	MW-1 S-2 TCLP
Ag - Silver	ND	ND	1	ND	
As - Arsenic	3	1	9	7	ND
Ba - Barium	19.0	153	753	2.3	-----
Cd - Cadmium	ND	ND	20	ND	ND
Cr - Chromium	11	10	27	8	ND
Hg - Mercury	ND	ND	0.14	0.15	-----
Pb - Lead	4	4	996	4	ND
Se	ND	ND	ND	ND	-----

TABLE 4 - MONITORING WELL ANALYSIS				
ANALYTE	MW-1 (Water)	MW-1 S-2 TCLP (Soil)	MW-2 (Water)	MW-3 (Water)
TPH (Soil)	-----	16 ppm	-----	-----
TPH (Water)	ND	-----	ND	-----
As - Arsenic	ND	ND	ND	-----
Cd - Cadmium	ND	ND	ND	-----
Cr - Chromium	ND	ND	ND	-----
Pb - Lead	ND	ND	ND	-----
Tetrachloroethylene	4,250 ppb	2,200 ppb	ND	ND
Other VOCs	ND	ND	ND	ND

APPENDIX G

ADEC MATRIX SHEET

ADEC SOIL CLEANUP LEVEL MATRIX TABLE

SITE CHARACTERISTIC	POSSIBLE SCORE	SCORE
1. Depth to Subsurface		
< 5 feet	(10)	4
5 to 15 feet	(8)	
15 to 25 feet	(6)	
25 to 50 feet	(4)	
> 50 feet	(1)	
2. Mean Annual Precipittion		
> 40 inches	(10)	5
25 to 40 inches	(5)	
15 to 25 inches	(3)	
< 15 inches	(1)	
3. Soil Type (Unified Soil Classification)		
Clean, coars-grained soils	(10)	8
Coarse-grained soils with fines	(8)	
Fine-grained sils (low organic content)	(3)	
Fined-grained soils (high organic content)	(1)	
4. Potential Receptors		
Public Well within 1,000 feet or Private well(s) within 500 feet	(15)	12
Municipal/private well within ½ mile	(12)	
Municipal/private well within 1 mile	(8)	
No known well within ½ mile	(6)	
No known well within 1 mile	(4)	
Non-potable groundwater	(1)	
5. Volume of Contaminated Soil		
>500 cubic yards	(10)	8
100 to 500 cubic yards	(8)	
25 to 100 cubic yards	(5)	
>De Minimis to 25 cubic yards	(2)	
De Minimis	(0)	

Matrix Score 37	Cleanup Level in mg/kg			
	Diesel Range	Gasoline Range	Benzene	BTEX
Category A >40	100	50	0.1	10
Category B 27 to 40	200	100	0.5	15
Category C 21 to 26	1,000	500	0.5	50
Category D < 20	2,000	1,000	0.5	100

APPENDIX H

MONITORING WELL REPORTS

Quality Environmental Sampling

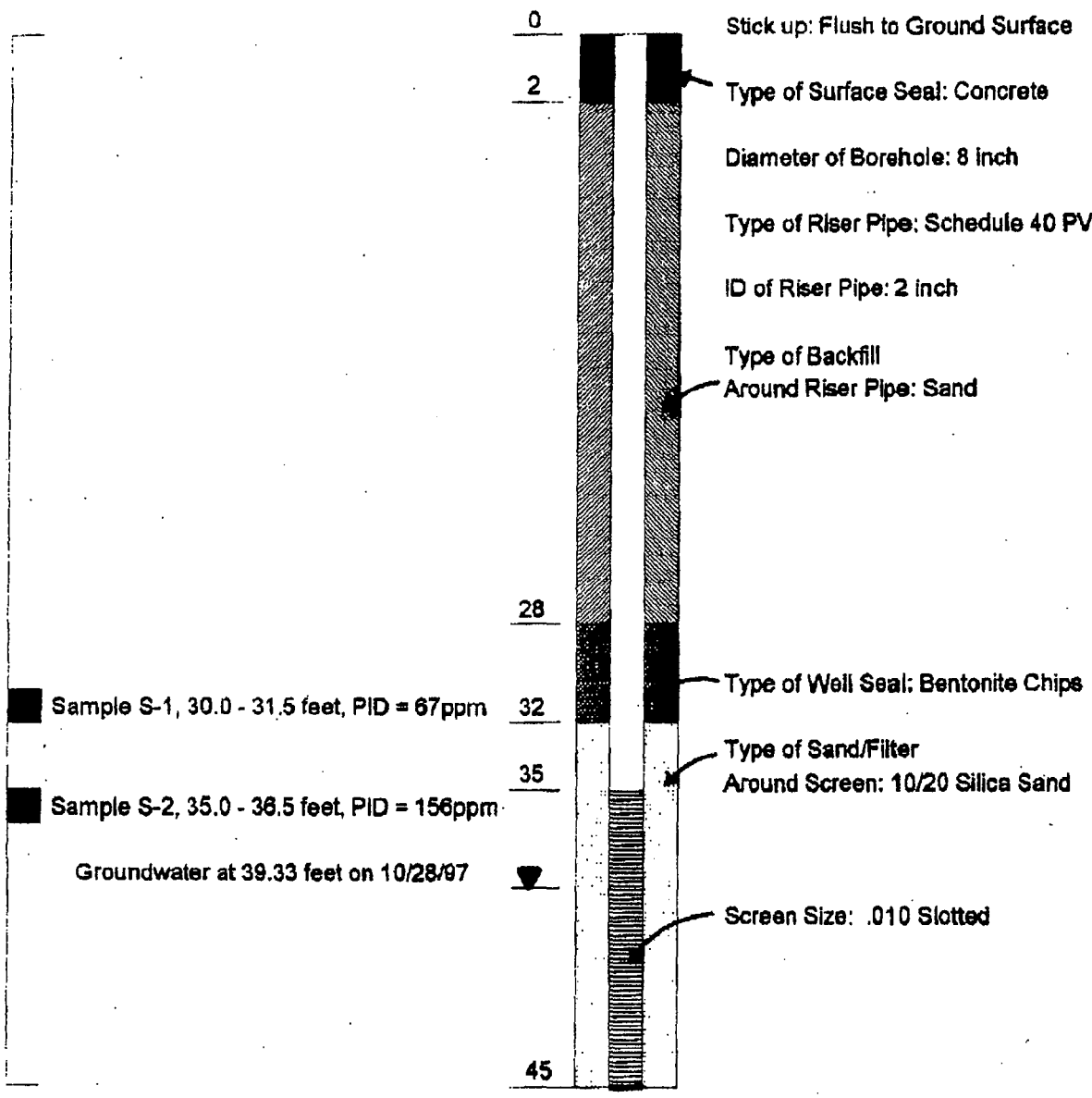
MONITORING WELL INSTALLATION REPORT

Project Name: EPMI 4th & Gambell
Project Location: Anchorage, Alaska
Installation Date: October 21, 1997

Well No.: MW-1
Drilling Method: Mobile B-61, 8 in. Hollow Stem Auger
Observer: Cliff Morrison, QES

SAMPLE LOCATIONS

DEPTH OF COMPONENTS IN FEET



Remarks: _____

Quality Environmental Sampling

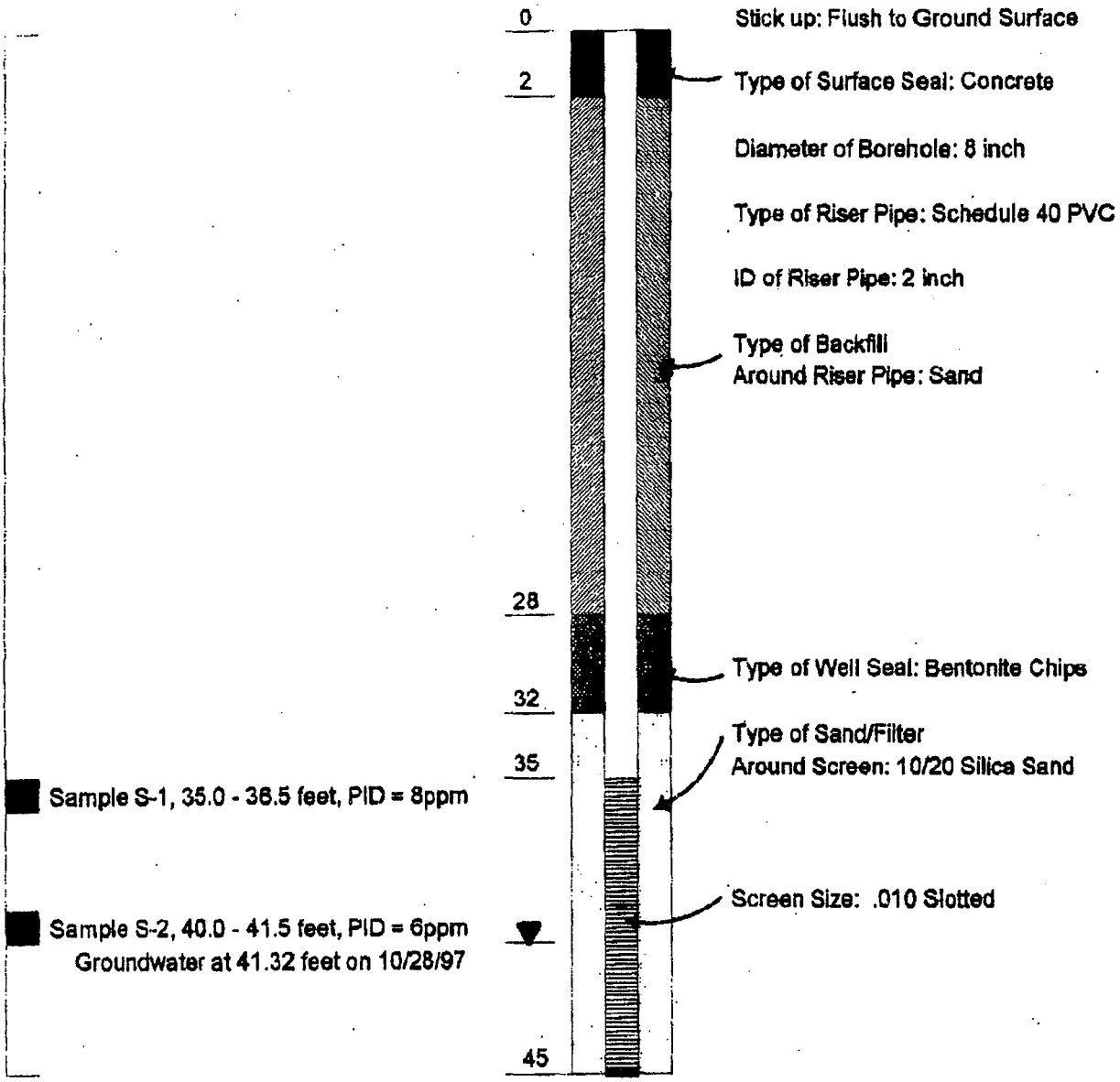
MONITORING WELL INSTALLATION REPORT

Project Name: EPMI 4th & Gambell
Project Location: Anchorage, Alaska
Installation Date: October 21, 1997

Well No.: MW-2
Drilling Method: Mobile B-61, 8 in. Hollow Stem Auger
Observer: Cliff Morrison, QES

SAMPLE LOCATIONS

DEPTH OF COMPONENTS IN FEET



Relative TOC Elevation: 98.13 Feet

Stick up: Flush to Ground Surface

Type of Surface Seal: Concrete

Diameter of Borehole: 8 inch

Type of Riser Pipe: Schedule 40 PVC

ID of Riser Pipe: 2 inch

Type of Backfill Around Riser Pipe: Sand

Type of Well Seal: Bentonite Chips

Type of Sand/Filter Around Screen: 10/20 Silica Sand

Screen Size: .010 Slotted

Remarks: _____

Quality Environmental Sampling

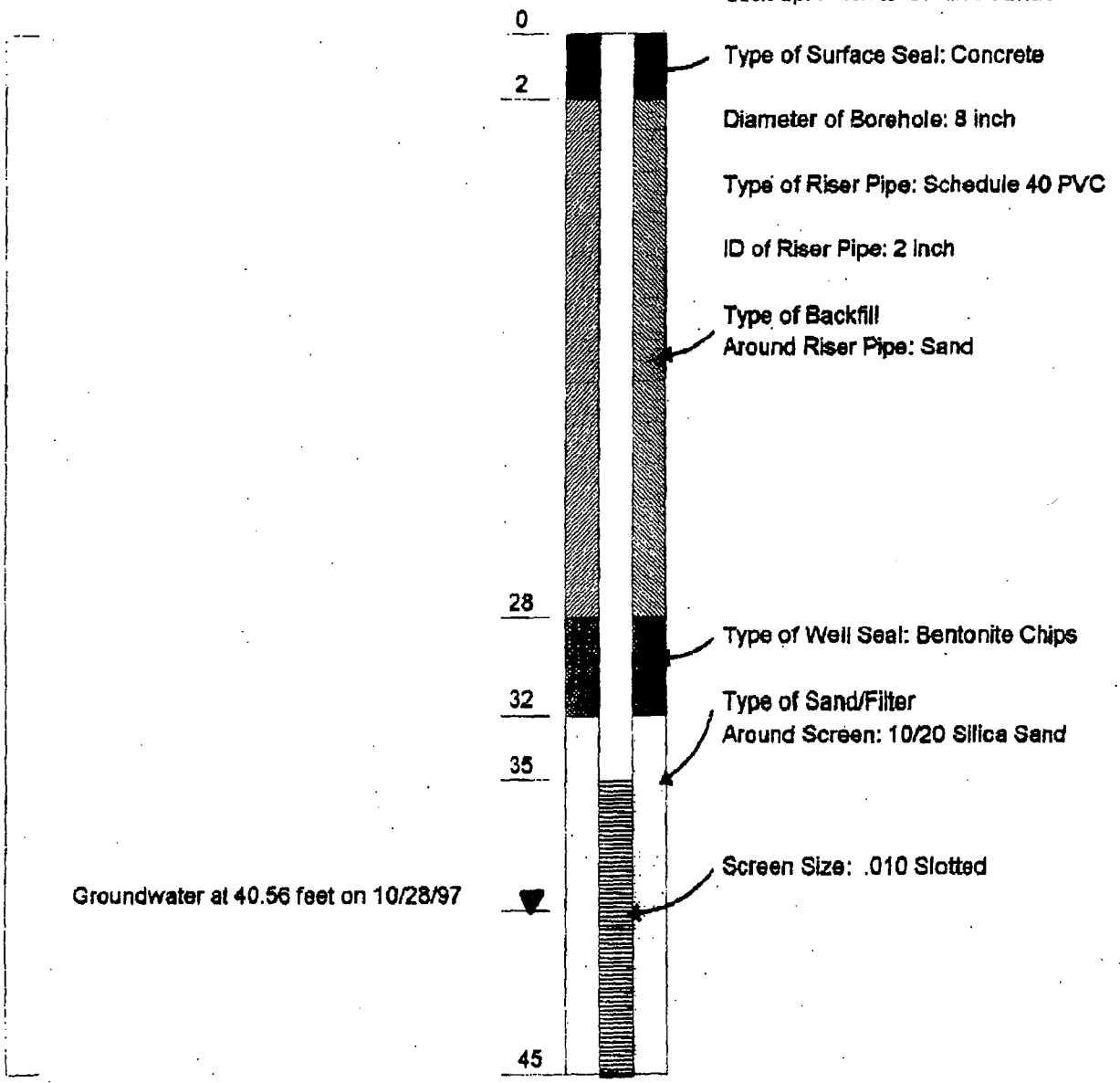
MONITORING WELL INSTALLATION REPORT

Project Name: EPMI 4th & Gambell
Project Location: Anchorage, Alaska
Installation Date: October 22, 1997

Well No.: MW-3
Drilling Method: Mobile B-61, 8 in. Hollow Stem Auger
Observer: Cliff Morrison, QES

SAMPLE LOCATIONS

DEPTH OF COMPONENTS IN FEET



Relative TOC Elevation: 97.77 Feet

Stick up: Flush to Ground Surface

Type of Surface Seal: Concrete

Diameter of Borehole: 8 inch

Type of Riser Pipe: Schedule 40 PVC

ID of Riser Pipe: 2 inch

Type of Backfill Around Riser Pipe: Sand

Type of Well Seal: Bentonite Chips

Type of Sand/Filter Around Screen: 10/20 Silica Sand

Screen Size: .010 Slotted

Remarks: _____

Groundwater Monitoring and Sampling Record

Facility Number: EPMI
Street Address: 4th & Gambell
City, State: Anchorage, Alaska

Sampling Personnel: Cliff Morrison / Pat Stimon

Monitor Well Number	MW-3	MW-2	MW-1					
General Data								
Well Accessible (Y/N)	Y	→	→					
Well Diameter	2"	→	→					
Depth to bottom of Well (ft) (From MP)	44.8'	44.8	44.2					
Height of Water Column in Well (ft)	~4.5	~4	~5					
Liquid Hydrocarbon or Sheen (Y/N)	N	N	N					
Depth to Water (hold/cut)	40.47'	41.35'	39.26'					
Depth to Hydrocarbon (hold/cut)	NA	NA	NA					
Measurement Date and Time	10/26/97	→	→					
	1015	1025	1040					
Well Purging Data								
Purging Technique	Bailer	→	→					
Gallons Purged	~2.5	~2.5	~2.5					
Casing Volumes Purged *	3	3	3					
Well Sampling Data								
Sample ID on C.O.C.	MW-3	MW-2	MW-1					
Sampling Date	10/25/97	→	→					
Sampling Time	1300	1320	1340					
Sampling Technique	Bailer	→	→					
Sample Preservation	HCl/Ice	→	→					
Observations								
Sheen (Y/N)	N	N	N					
Odor (Y/N)	*	*	*					

Comments

* No odor observation made

10/28/97 "Depth to Water" M/Smt.'s
MW-1 = 39.33'
MW-2 = 41.32'
MW-3 = 40.56'

NOTE: All measurements should be referenced from top of casing at surveyed measuring point, unless otherwise documented on this form.

* In general, three casing volumes should be removed or the well should be allowed to recover to at least 60% of the pre-purge staticbefore sampling.